SAM (REX/Ops) Operations Meeting 2008.01.15

For reports submitted to the meeting...
The report text is in this font
Comments made during the meeting are in this font inline with the report

Releases:

No new releases planned soon. We deployed DB server 8.4.2 yesterday, which had the new cached file move feature. Unfortunately, this version included Randolph's request system changes -- and this messed up Joel's Queue.py, since that requires a more recent client. We went back to previous DB server version for user and station DB servers (because Robert suspects that some of the Grid sites are not careful about their configurations and are using the station DB servers by mistake). "sam get request information" from the old client fails with the new DB server. We left the new DB server on the cabsrv1/2 to move to the cached file history (140K cached files since midnight this morning was moved).

Robert started a new DB server (in production) - test_prd which Joel is using for testing. And Joel is running on d0mino01 that has the latest client. Testing is going well.

So plan now is to let Joel do his testing. If successful, Joel needs to upgrade his client. Then Joel can tell us to upgrade our DB servers to 8.4.2.

Adam will try to come up with a plan to avoid this problem in the future.

DOE CA Certificate Debacle:

CA Cert expired on Thursday. [Randolph says he warned the helpdesk about this expiration]. Most of D0 SAMGrid was using old VDT which could not handle the old CA cert. (Note the new VDT automatically handles these changes). Almost every D0 SAMGrid node, except the new forwarding and queueing nodes where affected. dCache was affected as well, but only for people who move files offsite. And any SAM site using sam_gridftp. Stkken dCache was affected. Parag made a new sam_gsiconfig with the latest CA cert in it. Now the DOE CA cert is valid until 2013. For CDF, Thomas Kuhr updated CDF products for the new CA cert. MINOS had SRM copy problems due to the cert.

Lots of people's personal certificates failed as well.

DØ:

Kin Yip to sam-design

Noticeable events last week:

--- d0rsam01.fnal.gov and jetsam-clued0.fnal.gov both hung. The shifter on shift helped reboot jetsam-clued0 (as she's also a clued0-admin)
   and d0rsam01 was brought back up by "helpdesk".

--- only with shifters for half of the week.

Unresolved issues :

#3315: "error when trying to access a dataset from SAM webpage" ... probably would be cleared when the shifter wakes up.
Working now.

#3313: "samgfwd01.fnal.gov Gridftp error " --- another DOE CA problem or ??
Steve will look into this one - generating NGOP alarms

#3296: "bad MC merge job effciency " --- J. Snow said today that this problem has persisted. Can anyone look into this ??
We're meeting about this one on Thursday.

No more newly unresolved issues after Jan. 1st, 2008 except the last 3.

Comments

CDF:
Krzysztof Genser to sam-design

CDF SAM Shift Report 01/08/08 - 01/15/08

relatively quiet week (and light usage)

several tape/mover problems; most noticeable:

IA1480 broken leader
IAD846 dropped on the robot floor ("lost")

causing several days of no access to the data on them

01/10 SL8500 was paused at 12:00 for ~30min to pick up IAD846 and
to have its arm element replaced; ~14:00 ~2h downtime

LTO3_10 mover(pc) down since 01/08

dcache fcdfdata320 still offline awaiting a reinstall

integration dbservers updated to sam_db_srv_pkg v8_4_1 (AMB)

CA (root) certificate expired last week forcing updates e.g.
for remote sites and dcache nodes

Intermittent CSL To Enstore link problems on 01/14 ~12:00~16:00
(during no beam time)
bspool machine (nfs server for online) was getting slow, and so monitoring was timing out. Krzysztof thinks tests were being run during this time, but control room did not confirm. Problem is resolved now.

Files are being added with wrong length and CRC. Possible failure of transfer to enstore - or wrong file was stored. Perhaps best thing is to ask producers what to do with it (normal policy is to make DB match enstore reality).

MINOS:

Arthur Kreymer to sam-design, minos_sam_admin
General -

   AFS - Timeouts of some servers are continuing

Enstore -

DCache   -

   Some brief SRM interruptions due to the DOE CA certificate expiration.

   Delayed by E907/Mipp writing over 20K files to write pools over the weekend,
   this time large files, net 10 TBytes, all to a single file family.
   Recovered sometime Monday.

BlueArc/Nexsan -

   Nexsan software upgraded Thu 10 Jan, no problems since then.

SAM   -

   IT 3128. sam_products for sam_station v6_0_5_22_srm
   IT 1894 Need 'sam locate' in C++ API

Oracle   -

OPEN ISSUES

   IT 1146: cannot test existence of sam tape location

IT 1894: sam locate via C++ api, for simple client needs
IT 1979: Compiler warnings from sam_cpp_api
IT 2071: quadratic project startup time growth
IT 3128. sam_products for sam_station v6_0_5_22_srm

PLAN   -
Migration to 9940B tape can proceed anytime

Comments

DB:

Anil Kumar to sam-design

Oracle's quartely Security patches are expected to be realease on Jan 15, 2008
CSS-DSG group will be scheduling downtimes for Dev/int and production databases in coming weeks.

D0 :

- On 12/04/07 SAM cut v6_10 on d0ofdev1/dofint1 - To add composite index on lower(file_name) and retired_date
                              - Drop the unique index on lower(file_name)
                                 Recreated as non-unique on file_name.
                                 dropped the unique constraint on file_name and retired_date
 Note: V6_10 will be deployed during downtime.
These will occur during the Feb downtime.

Alerts:

- Fri Jan 11 10:21:00 CST 2008
Information for: d0ofprd1

Owner Object   Type Extents Used Extents Allocated Extents Left
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 ----
SAMPRD CFH_PK   INDEX   397   400   3

Action: Increased the maxextents to 800

- Message=Tablespace [PARTITIONED_IDX_01] is [80 percent] full

Action: Added 8GB

- Mon Jan 14 12:41:01 CST 2008
Information for: d0ofprd1

Owner Object   Type Extents Used Extents Allocated Extents Left
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 ----
SAMPRD CACHED_FILE_HISTS   TABLE   96   100   4

Action : Increased the max extents to 500

CDF :
    - SAM v6_10 pending on cdfofpr2 - Will be deployed during downtime
    - SAM v6_13 (index on create date on cached files tables) done on
cdfofdev/cdfofint/cdfofpr2

Alerts:

- Information for: cdfofpr2

Owner Object   Type Extents Used Extents Allocated Extents Left
---------------- ---------------------------------- ----- ------------ -----------------
 ----
SAMPRD FI_PV_PV_FK_I   INDEX   1996   2000   4

Action : Increased the maxextents to 4000

- Message=Tablespace [OPERATIONAL_IDX_01] is [85 percent] full

Action : Added 4GB

MINOS:

- Buffer Cache Hit Ratio on minosprd is 67%. Maximum is allocated to
oarcle.
  Need to upgrade the memory on node hosting minosprd.
  Maurine M. is looking into this.
*Art says to try to live with this problem unless there is a user impact that is noticed.
Since this is an old machine and is not in warranty, probably best to leave it alone.
Better to replace the machine.*

Details:
http://www-css.fnal.gov/dsg/internal/minos/dec13_tuning_minosprd.htm

- SAM v6_10 pending on Minosprd - Will be deployed during downtime
- SAM v6_13 (index on create date on cached files tables) done on minosdev/minosint/minosprd

DB server machines were getting Oracle TNS (12000) error. Probably due to network glitch (Robert doesn't believe this, since other servers on the machine were not affected and the DB server getting the error was dead until restarted -- somehow OCI or cx_oracle could not reconnect). DB server 8.4.2 will now catch this exception. Waiting to see this again (never seen it before).

Enstore/dCache:

David Berg to sam-design, enstore-admin
enstore/dcache report

Scheduled Downtimes:

 o cdfen - Wed Feb 13 or Thu Feb 14 ??
   - upgrade cdf enstore servers and raid arrays to SDE h/w and s/w
Some enstore servers are still running the old enstore software environment. Upgrading them will make moving services much easier. This downtime would be all day. K: Need to consolidate downtimes.

Operations:

 o d0en
   - Running low on 9940B tapes: currently 75 blanks, enough for
     about 2 weeks at current rates. Please consider recycling some
     9940 media (either A or B). We will borrow some from CDF.

 o stken
   - Running low on 9940B tapes: currently 130 blanks. Rate seems
     to be leveling off; only 7 written last week. We are gearing
     up to start migrations again. We have moved des, sdss, lqcd,
     and part of minos off 9940B to LTO3 media.

 o fndca
   - Need to reboot fndca14a; it has only read and volatile pools.
   - Mipp (e907) has written ~9 TB thru dcache in the past couple
     weeks, and will be continuing at this rate. They increased
     file family width to 2, which appears to have helped reduce
     the lifetime of precious files. Is it enough? *Bottleneck was writing to one file family. But still checking is this change is sufficient.*

Still needs to upgrade the public DOE CA cert.

o cdfen
  - Another 600 blank LTO3s loaded and declared to enstore. There
    should be 760 tapes still in storage, waiting for labels.

o cdfdca
  - Nothing to report. *except for DOE CA cert problems.*

encp in AFS space (v3.7) is intended to be stand-alone, but was missing a link to a python library. So failed on fnalu - was rebuilt and is working.

More problems with handbot on SL8500 #1 - replacement occurred quickly, since repair tech was onsite and had a spare arm. For the same robot, a tape was dropped on the floor (see CDF report above). Repair tech said he'd never seen this kind of robot drop a tape. Not sure why the tape fell.

Tape with broken leader was cloned and data are back in production.

One of the LTO3 mover PC is still down and is waiting a service call. Awaiting new motherboard.